

REMARKS

Claims 1, 31, 50 and 51 are amended. Claims 1-51 are in the application for consideration.

Applicant's amended independent claim 1 recites reducing partial pressure of the oxidizer and the reducer within the chamber by the act of flowing an inert gas to the chamber while chamber pressure and chamber temperature are at or above those of the conditions during the exposing. Amended independent claim 1 also recites that such reducing of partial pressure occurs after the selective growth and while exposing the substrate to the oxidizer and the reducer within the chamber. Cho et al. neither expressly nor impliedly encompasses all of these limitations of Applicant's amended claim 1.

Specifically, paragraph [0027] of Cho et al. discloses a post-oxidation annealing process using hydrogen, which is the reducer used during the oxidation. Paragraph [0028] states that an inert gas is "added", and that such annealing is performed at a temperature range of at least 1000°C, and which paragraph [0031] discloses is at or above the temperature of the oxidation. However, paragraph [0031] indicates that the selective oxidation is performed, and "then" the annealing process is performed in an ammonia (i.e. a reducing) ambient. Paragraph [0031] also states that "[t]hereafter", another annealing process occurs in an inert ambient. The Cho et al. disclosure is clear that the annealing processes occur after the selective oxidation. There is no disclosure that such annealing occurs during the oxidation, nor is there any disclosure that

any of the oxidizer gas is present in the chamber during such annealing. Indeed, the inference is clearly that no oxidizer is present within the chamber during the annealing with a hydrogen-containing gas followed by the optional inert gas annealing.

Yet, Applicant's amended claims 1 and 31 clearly recites that the act of reducing partial pressure of the reducer and the oxidizer within the chamber occurs while the substrate is exposed to both the reducer and the oxidizer. There is no disclosure or inference in Cho et al. that any of the oxidizer is present in the chamber when either the hydrogen-containing gas-flowing occurs or the added inert gas-flowing occurs. Accordingly, Applicant's amended claims 1 and 31 positively recite something which is not disclosed in Cho et al., and accordingly the anticipation rejections thereof should be withdrawn. Action to that end is requested.

Further and regardless, Cho et al. clearly disclose in its annealing process the flowing of added reducer (i.e. the hydrogen-containing gas), perhaps with or without an inert gas. Accordingly, the act of the stated annealing by Cho et al. implies increasing partial pressure of the reducer, and thereby does the opposite of Applicant's claim-recited reducing partial pressure of the reducer.

In summary, Cho et al. does not disclose flow of inert gas during its annealing when any oxidizer is exposed to the substrate, and regardless discloses increasing partial pressure of the reducer. Such in no way can be interpreted to disclose reducing partial pressure of a reducer and an oxidizer while a substrate is exposed to the reducer and the oxidizer. Accordingly, the

anticipation rejections to Applicant's amended independent claims 1 and 31 must be withdrawn.

Analogous amendments have been made to Applicant's independent claims 51 and 52 with respect to recitation of H_2O and H_2 . As asserted above, Cho et al. in no way discloses reducing partial pressure of H_2 and H_2O within the chamber by the act of flowing an inert gas while the substrate is being exposed to both H_2 and H_2O . Accordingly, amended claims 50 and 51 are not anticipated by Cho et al., and the rejection thereof should be withdrawn.

Joo et al. does not overcome the deficiencies identified above with respect to Cho et al. Further, Applicant's dependent claims should be allowed as depending from allowable base claims, and for their own recited features which are neither shown nor suggested in the cited art. Action to that end is requested.

Applicant's independent claims 1 and 31 have been amended to change "positioning" to "providing", and no new matter is added thereby. Specifically, a substrate which is positioned in a deposition chamber must be provided therein. Entry of such amendment is requested.

This application is believed to be in immediate condition for allowance.

Respectfully submitted,

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By: 

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